



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,456	08/04/2006	Koichi Ebata	093529-0107	5744
22428 7590 03/16/2011 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER MAPA, MICHAEL Y	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 03/16/2011	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/588,456

**Applicant(s)**

EBATA, KOICHI

**Examiner**

Michael Mapa

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/20/10 has been entered.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 10/20/10 has been considered by the examiner.

### ***Response to Amendment***

3. The applicant has amended the following:

Claims: 1-3, 5, 7-11, 15-16, 19, 21-22 and 25 has been amended.

Claims: 4, 6, 12-14, 17-18, 20, 23-24 and 26 has not been amended.

### ***Response to Arguments***

4. Applicant's arguments filed 10/20/10 have been fully considered but they are not persuasive.

The applicant argues features wherein a monitor apparatus of a wireless network connected to an access point of the wireless network via a network, said access point retaining packet transfer information including information of a correspondence between a port of said access point and an interface of said port, and information of a correspondence between an address of a transfer destination and the port, said monitor apparatus comprising: a managed terminal list having addresses of terminals registered, said terminals being targets of management; a means configured to receive said packet transfer information from said access point, to detect a port bound to a wireless interface, said wireless interface being the port of the access point, from said packet transfer information, and extract an address of a transfer destination corresponding to said detected port; and an estimating means for estimating that a terminal corresponding to an address registered in said managed terminal list, said address coinciding with said extracted address, having exists as a subordinate of the access point retaining said received packet transfer information.

5. Before addressing the applicant's arguments, the examiner would like to clarify the position taken with respect to the applied art:

Siddiqi discloses a wireless authoritative access point AAP (monitor apparatus connected to the access point) having subordinate access points AP (managed terminals), wherein the AAP (monitor apparatus connected to the access point) receives

a subnet mapping table (packet transfer information) from a second AAP (monitor apparatus connected to the access point) and storing the subnet mapping table in the AAP, therefore means connected to an access point configured to receive packet transfer information retained in said access point and the AAP (monitor apparatus connected to the access point) is connected to other AAP (monitor apparatus connected to the access point) via the network since the AAPs communicate with each other. Siddiqi continues to disclose the AAP comparing the received mapping table with the stored mapping table to determine if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table. The AAP will add that access point (AP) entry to its table after confirming that the AP identified in that entry is still alive by sending an ALIVE packet and not adding the entry if the AAP determines that the AP identified is not reachable, therefore extracting the address of the AP (wireless interface, terminal) from the received subnet mapping table and determining and estimating if the AP (wireless interface, terminal) is a subordinate or has a connection with the access point retaining said packet transfer information.

Fukutomi discloses an edge router having multiple subordinate routers wherein the edge router has a mapping table that stores the IP addresses and list information on the numbers of the receiver ports of the LAN interface of the edge router to which subordinate routers reaching receiver hosts are connected.

With regards to the applicant's arguments that neither references discloses or even suggests storing "a managed terminal list having addresses of terminals registered, said terminals being targets of management", the examiner respectfully

disagrees. Siddiqi discloses the AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask, therefore Siddiqi discloses storing a managed terminal list (subnet mapping table) storing a plurality of entries of AP (managed terminal) information which is managed by each AAP.

With regards to the applicant's arguments that neither references discloses or even suggests "receiving packet transfer information from an access point; detecting a port bound to a wireless interface from said packet transfer information said wireless interface being the port of the access point, extracting an address of a transfer destination corresponding to said detected port", the examiner respectfully disagrees. Siddiqi discloses an authoritative access point AAP (monitor apparatus connected to the access point) maintaining a subnet mapping table storing a plurality of entries each storing managed AP (managed terminal) information and synchronizing the subnet mapping table (packet transfer information) in the network by sending the subnet mapping table to all the APs and other AAPs and continues to disclose an example wherein a second authoritative access point AAP sending AP information such as a subnet mapping table to a first AAP and wherein the first AAP attempts to add entries from the received subnet mapping table to its own subnet mapping table by first comparing and determining if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table of the first AAP and then determining whether the AP IP address ("wireless interface transfer destination" of managed terminal) is stored in its subnet mapping table and then confirming that the

entry is still active and reachable by sending an ALIVE packet to the AP IP address identified and if the AP is active, it sends an ALIVE ACK packet back to the AAP which includes its current subnet address and IP address and the AAP will then use this latest information and enter it into its existing subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) has a correspondence between itself and a managed AP (managed terminal) when determining to add the managed AP by sending an ALIVE packet to determine if the managed AP is reachable or not and the AAP (monitor apparatus connected to the access point) is connected to other AAP (monitor apparatus connected to the access point) via the network since the AAPs communicate with each other and Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver. Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used

methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

With regards to the applicant's arguments that neither references discloses "estimating that a terminal corresponding to an address registered in said managed terminal list, said address coinciding with said extracted address, exists as a subordinate of the access point retaining said received packet transfer information" and "investigating an operation situation of a terminal corresponding to an address registered in said managed list, said list address coinciding with said extracted address, to determine that said terminal having said extracted address has a connection with the access point retaining said received packet transfer information in a case where said terminal having said address is in operation", the examiner respectfully disagrees. Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to



add to its local mapping table in order for the AAP to determine if the AP is its subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added which reads on the claimed limitations.

6. Therefore, the argued limitations read upon the cited references or are written broad such that they read upon the cited references, as follows:

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5, 7-11, 13-19 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siddiqi et al. (US Patent 7362742 herein after referenced as Siddiqi) in view of Fukutomi (US Patent Publication 2003/0012202 herein after referenced as Fukutomi).

Regarding claim 1, Siddiqi discloses:

The applicant claims "A monitor apparatus of a wireless network connected to an access point of the wireless network via a network, said access point retaining packet

transfer information including information of a correspondence between said access point and between an address of a transfer destination" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25 & Column 7, Lines 6-21 & Lines 55-61 & Column 8, Lines 24-33 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses an authoritative access point AAP (monitor apparatus connected to the access point) maintaining a subnet mapping table storing a plurality of entries each storing managed AP (managed terminal) information and synchronizing the subnet mapping table (packet transfer information) in the network by sending the subnet mapping table to all the APs and other AAPs and continues to disclose an example wherein a second authoritative access point AAP sending AP information such as a subnet mapping table to a first AAP and wherein the first AAP attempts to add entries from the received subnet mapping table to its own subnet mapping table by first comparing and determining if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table of the first AAP and then determining whether the AP IP address ("wireless interface transfer destination" of managed terminal) is stored in its subnet mapping table and then confirming that the entry is still active and reachable by sending an ALIVE packet to the AP IP address identified and if the AP is active, it sends an ALIVE ACK packet back to the AAP which includes its current subnet address and IP address and the AAP will then use this latest information and enter it into its existing subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) has a correspondence between itself and a managed AP (managed terminal) when determining to add the managed AP by

sending an ALIVE packet to determine if the managed AP is reachable or not and the AAP (monitor apparatus connected to the access point) is connected to other AAP (monitor apparatus connected to the access point) via the network since the AAPs communicate with each other).

The applicant claims "said monitor apparatus comprising: a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4, & Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "a means configured to receive said packet transfer information from said access point and extract an address of a transfer destination and an estimating means for estimating that a terminal corresponding to an address registered in said managed terminal list, said address coinciding with said extracted address, having exists as a subordinate of the access point retaining said received packet transfer information" (Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK

before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "packet transfer information including information of a correspondence between a port of said access point and an interface of said port, and information of a correspondence between an address of a transfer destination and the port" and "a means to detect a port bound to a wireless interface, said wireless interface being the port of the access point, from said packet transfer information, and extract an address of a transfer destination corresponding to said detected port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "packet transfer information including information of a port of said access point and an interface of said port" and "a means to detect a port bound to a wireless interface, said wireless interface being the port of the access point, from said packet transfer information, and extract an address of a transfer destination corresponding to said detected port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP

addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Siddiqi in view of Fukutomi discloses:

The applicant claims "packet transfer information including information of a correspondence between a port of said access point and an interface of said port, and information of a correspondence between an address of a transfer destination and the port" and "a means to detect a port bound to a wireless interface, said wireless interface being the port of the access point, from said packet transfer information, and extract an address of a transfer destination corresponding to said detected port" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25 & Column 7, Lines 6-21 &

Lines 55-61 & & Column 8, Lines 24-33 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi & Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Siddiqi discloses the AAP receiving a subnet mapping table and checking the entries to determine if there are any entries to add and once an entry is determined sending an ALIVE packet to the AP address to determine if the AP is reachable and therefore a subordinate and waiting for a response ALIVE ACK from the AP before adding the entry information for that AP and wherein Fukutomi discloses a mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore once the AAP receives the subnet mapping table (packet transfer information) and determines whether to add AP information by sending an ALIVE packet to the AP address, there would need to be a corresponded between the port of the AAP and the wireless interface of the AAP as well as the port and wireless interface of the managed AP in order for any information to be sent or received).

Regarding claim 2, Siddiqi discloses:

The applicant claims "A monitor apparatus of a wireless network connected to an access point of wireless network via a network" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25 & Column 7, Lines 6-21 & Lines 55-61 & & Column 8, Lines 24-33 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses an authoritative access point AAP (monitor apparatus connected to the access point) maintaining a subnet mapping table storing a plurality of entries each storing managed AP (managed terminal) information and synchronizing the subnet mapping table (packet transfer information) in the network by sending the subnet

mapping table to all the APs and other AAPs and continues to disclose an example wherein a second authoritative access point AAP sending AP information such as a subnet mapping table to a first AAP and wherein the first AAP attempts to add entries from the received subnet mapping table to its own subnet mapping table by first comparing and determining if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table of the first AAP and then determining whether the AP IP address ("wireless interface transfer destination" of managed terminal) is stored in its subnet mapping table and then confirming that the entry is still active and reachable by sending an ALIVE packet to the AP IP address identified and if the AP is active, it sends an ALIVE ACK packet back to the AAP which includes its current subnet address and IP address and the AAP will then use this latest information and enter it into its existing subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) has a correspondence between itself and a managed AP (managed terminal) when determining to add the managed AP by sending an ALIVE packet to determine if the managed AP is reachable or not and the AAP (monitor apparatus connected to the access point) is connected to other AAP (monitor apparatus connected to the access point) via the network since the AAPs communicate with each other).

The applicant claims "said monitor apparatus comprising: a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4, & Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the AAP

maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "a means configured to receive said packet transfer information from said access point and to extract an address of a transfer destination and a determining means for investigating an operation situation of a terminal corresponding to an address registered in said managed list, said list address coinciding with said extracted address, to determine that said terminal having said extracted address has a connection with the access point retaining said received packet transfer information in a case where said terminal having said address is in operation" (Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its



subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "a means configured to detect a port bound to a wireless interface, said wireless interface being the port of the access point, from said packet transfer information and to extract an address of a transfer destination corresponding to said detected port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "a means configured to detect a port bound to a wireless interface, said wireless interface being the port of the access point, from said packet transfer information and to extract an address of a transfer destination corresponding to said detected port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a

mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Regarding claim 3, Siddiqi in view of Fukutomi discloses:

The applicant claims "The monitor apparatus of a wireless network according to claim 2, further comprising: a determining means for comparing said extracted address with an address described in said managed terminal list" (Fig. 6 & Column 9, Lines 43-46 of Siddiqi, wherein Siddiqi discloses the AAP receiver checking and determining if the AP IP address is stored in its own subnet mapping table).

The applicant claims "and for, in a case where said extracted address is not included in said managed terminal list, determining that an access to the access point retaining said packet transfer information has been made by a terminal that is not a target of management" (Fig. 6 & Column 9, Lines 43-46 & Lines 53-58 of Siddiqi, wherein Siddiqi discloses the AAP receiver checking if the AP IP address is in its subnet mapping table and if it is not included within the subnet mapping table of the AAP receiver sending an ALIVE packet to determine if the AP is active).

Regarding claim 4, Siddiqi in view of Fukutomi discloses:

The applicant claims "The monitor apparatus of a wireless network according to claim 2, further comprising: a means for drawing a result on a relation

between an access point and terminals, which are estimated to be existent as subordinates of said access point, or are determined to be in connection with said access point" (Fig. 6 & Column 9, Lines 53-58 of Siddiqi, wherein Siddiqi discloses the AAP receiver sending an ALIVE packet to the AP IP address which was identified under the sending AAP subnet mapping table to determine if the AP is active, if the AP is active it will send an ALIVE ACK back to the receiver AAP).

The applicant claims "for all the access points under management thereof to display a relation between each access point and each terminal that is estimated to be existent as a subordinate of each access point, or each terminal that is determined to be in connection with each access point" (Fig. 4 & Column 8, Lines 24-43 of Siddiqi, wherein Siddiqi discloses the subnet mapping table being maintained by the AAP to contain AP information such as subnet mask and IP address).

Regarding claim 5, Siddiqi in view of Fukutomi discloses:

The applicant claims "The monitor apparatus of a wireless network according to claim 2, characterized in, in a case where the address of the identical terminal has been described in said packet transfer information retained by plural access points" (Column 10, Lines 35-40 & Column 8, Lines 48-50 of Siddiqi, wherein Siddiqi discloses the synchronization operation performed by the AAPs is done so that every AP in the entire network will have the same copy of the table and wherein Siddiqi discloses the AP being initially configured with one or more AAP).

The applicant claims "including: a means for, from among said packet transfer information, selecting the packet transfer information retained by the access point

belonging to an identical subnet to that of said terminal" (Column 7, Lines 17-18 & Column 9, Lines 37-45 of Siddiqi, wherein Siddiqi discloses that the AAP and all other APs maintain identical subnet mapping tables and wherein Siddiqi discloses the receiver AAP attempting to add entries from the received subnet mapping table to its own subnet mapping table and determines if the AP IP address is already stored in its own mapping table).

The applicant claims "and a means for, in a case where said selected packet transfer information retained by the access point belongs to the identical subnet to that of said terminal, and yet the number thereof is only one" (Column 8, Lines 48-50 of Siddiqi, wherein Siddiqi discloses the AP being initially configured with one or more AAP, therefore the number is only one when the AP is configured with only one AAP).

The applicant claims "estimating that said terminal exists as a subordinate of said one access point" (Fig. 4 & Column 8, Lines 25-34 & Column 9, Lines 34-60 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table of subordinate APs and checking whether the AP to be added is a subordinate or not by sending an ALIVE packet).

The applicant claims "for, in a case where said access point belongs to the identical subnet to that of said terminal, and yet the number thereof is plural" (Column 8, Lines 48-50 of Siddiqi, wherein Siddiqi discloses the AP being initially configured with one or more AAP, therefore the number is plural if the AP is configured with multiple AAP).

The applicant claims "estimating that said terminal exists as a subordinate of one of said plurality of said access points" (Fig. 4 & Column 8, Lines 25-34 & Column 9, Lines 34-60 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table of subordinate APs and checking whether the AP to be added is a subordinate or not by sending an ALIVE packet).

The applicant claims "and for, in a case where all said access points do not belong to the identical subnet to that of said terminal, and yet each thereof is an access point corresponding to a virtual LAN, estimating that said terminal exists as a subordinate of one of said access points corresponding to said virtual LAN, or determines that said terminal has a connection with to its access point" (Fig. 4 & Column 8, Lines 48-50 & Lines 25-34 & Column 9, Lines 34-60 of Siddiqi & Fig. 3-4 of Fukutomi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table of subordinate APs and the AAP receiving the subnet mapping table from other AAPs and checking whether the AP to be added is a subordinate or not by sending an ALIVE packet and wherein Fukutomi discloses having a VLAN receiver, therefore it would have been obvious to one of ordinary skill in the art for the invention to be used in a VLAN environment for the purpose of improving the system by implementing and conforming the invention to known systems currently in use).

Regarding claim 7, Siddiqi discloses:

The applicant claims "A monitor system of a wireless network, said monitor system comprising: at least one access point of a wireless network, said at least one access point retaining packet transfer information including information of a

correspondence between said at least one access point and an address of a transfer destination; at least one terminal of the wireless network; and a monitor apparatus connected to said at least one access point via a network" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25 & Column 7, Lines 6-21 & Lines 55-61 & & Column 8, Lines 24-33 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses an authoritative access point AAP (monitor apparatus connected to the access point) maintaining a subnet mapping table storing a plurality of entries each storing managed AP (managed terminal) information and synchronizing the subnet mapping table (packet transfer information) in the network by sending the subnet mapping table to all the APs and other AAPs and continues to disclose an example wherein a second authoritative access point AAP sending AP information such as a subnet mapping table to a first AAP and wherein the first AAP attempts to add entries from the received subnet mapping table to its own subnet mapping table by first comparing and determining if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table of the first AAP and then determining whether the AP IP address ("wireless interface transfer destination" of managed terminal) is stored in its subnet mapping table and then confirming that the entry is still active and reachable by sending an ALIVE packet to the AP IP address identified and if the AP is active, it sends an ALIVE ACK packet back to the AAP which includes its current subnet address and IP address and the AAP will then use this latest information and enter it into its existing subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) has a correspondence between itself

and a managed AP (managed terminal) when determining to add the managed AP by sending an ALIVE packet to determine if the managed AP is reachable or not).

The applicant claims "wherein said monitor apparatus comprises: a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4, & Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "a means configured to receive said packet transfer information from said at least one access point, and to extract an address of a transfer destination and an estimating means for estimating that a terminal corresponding to an address registered in said managed terminal list, said address coinciding with said extracted address, exists as a subordinate of the access point retaining said received packet transfer information" (Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet

transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "packet transfer information including information of a correspondence between a port of said at least one access point and an interface of said port, and information of a correspondence between an address of a transfer destination and the port" and "a means to detect a port bound to a wireless interface, said wireless interface being the port of the at least one access point, from said packet transfer information, and to extract an address of a transfer destination corresponding to said detected port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "packet transfer information including information of a port of said access point and an interface of said port" and "a means to detect a port bound to a wireless interface, said wireless interface being the port of the access point, from said packet transfer information, and extract an address of a transfer destination corresponding to said detected port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each



mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Siddiqi in view of Fukutomi discloses:

The applicant claims "packet transfer information including information of a correspondence between a port of said at least one access point and an interface of said port, and information of a correspondence between an address of a transfer destination and the port" and "a means to detect a port bound to a wireless interface, said wireless interface being the port of the at least one access point, from said packet transfer information, and to extract an address of a transfer destination corresponding to said detected port" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25 & Column 7, Lines 6-21 & Lines 55-61 & & Column 8, Lines 24-33 &

Column 9, Lines 15-24 & Lines 37-59 of Siddiqi & Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Siddiqi discloses the AAP receiving a subnet mapping table and checking the entries to determine if there are any entries to add and once an entry is determined sending an ALIVE packet to the AP address to determine if the AP is reachable and therefore a subordinate and waiting for a response ALIVE ACK from the AP before adding the entry information for that AP and wherein Fukutomi discloses a mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore once the AAP receives the subnet mapping table (packet transfer information) and determines whether to add AP information by sending an ALIVE packet to the AP address, there would need to be a corresponded between the port of the AAP and the wireless interface of the AAP as well as the port and wireless interface of the managed AP in order for any information to be sent or received).

Regarding claim 8, Siddiqi discloses:

The applicant claims "A monitor system of a wireless network, said monitor system comprising: at least one access point of the wireless network; at least one terminal of the wireless network; and a monitor apparatus connected to said access point via a network" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25 & Column 7, Lines 6-21 & Lines 55-61 & & Column 8, Lines 24-33 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses an authoritative access point AAP (monitor apparatus connected to the access point)

maintaining a subnet mapping table storing a plurality of entries each storing managed AP (managed terminal) information and synchronizing the subnet mapping table (packet transfer information) in the network by sending the subnet mapping table to all the APs and other AAPs and continues to disclose an example wherein a second authoritative access point AAP sending AP information such as a subnet mapping table to a first AAP and wherein the first AAP attempts to add entries from the received subnet mapping table to its own subnet mapping table by first comparing and determining if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table of the first AAP and then determining whether the AP IP address ("wireless interface transfer destination" of managed terminal) is stored in its subnet mapping table and then confirming that the entry is still active and reachable by sending an ALIVE packet to the AP IP address identified and if the AP is active, it sends an ALIVE ACK packet back to the AAP which includes its current subnet address and IP address and the AAP will then use this latest information and enter it into its existing subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) has a correspondence between itself and a managed AP (managed terminal) when determining to add the managed AP by sending an ALIVE packet to determine if the managed AP is reachable or not).

The applicant claims "wherein said monitor apparatus comprises: a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4, & Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the

AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "a means configured to receive said packet transfer information from said at least one access point, and to extract an address of a transfer destination and a determining means for investigating an operation situation of a terminal corresponding to an address registered in said managed list, said list address coinciding with said extracted address, to determine that said terminal having said extracted address has a connection with the access point retaining said received packet transfer information in a case where said terminal having said address is in operation" (Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its

subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "a means to detect a port bound to a wireless interface, said interface being the port of the at least one access point, from said packet transfer information, and to extract an address of a transfer destination corresponding to said detected port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "a means to detect a port bound to a wireless interface, said interface being the port of the at least one access point, from said packet transfer information, and to extract an address of a transfer destination corresponding to said detected port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a

mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Regarding claim 9, Siddiqi in view of Fukutomi discloses "The monitor system of a wireless network according to claim 8." The examiner rejects claim 9 with the same arguments provided above (see claim 3).

Regarding claim 10, Siddiqi in view of Fukutomi discloses "The monitor system of a wireless network according to claim 8." The examiner rejects claim 10 with the same arguments provided above (see claim 4).

Regarding claim 11, Siddiqi in view of Fukutomi discloses "The monitor system of a wireless network according to claim 8." The examiner rejects claim 11 with the same arguments provided above (see claim 5).

Regarding claim 13, Siddiqi in view of Fukutomi discloses:

The applicant claims "The monitor system of a wireless network according to claim 8, wherein: said terminal includes a means for transmitting a broadcast packet; and said access point includes a means for updating the packet transfer information that the access point retains based upon said broadcast packet" (Fig. 5 & Column 8, Lines 44-60 of Siddiqi, wherein Siddiqi discloses the AP sending an ADD or REMOVE message to the AAP and wherein when the AP shuts down it sends a REMOVE

message requesting that its IP address be removed from the subnet mapping table of the AAP).

Regarding claim 14, Siddiqi in view of Fukutomi discloses:

The applicant claims "The monitor system of a wireless network according to claim 8, wherein said access point further comprises: a means for notifying to the other access point information as to which access point to which the terminal belongs" (Fig. 6 & Column 9, Lines 16-24 of Siddiqi, wherein Siddiqi discloses a second AAP sending AP information such as its subnet mapping table to a first AAP).

The applicant claims "and a means for updating the packet transfer information that the access point retains based upon said information as to which access point to which said terminal belongs" (Fig. 6 & Column 34-50, wherein Siddiqi discloses the AAP receiver updating its own subnet mapping table by adding the entries from the received subnet mapping table that are not already in its own subnet mapping table).

Regarding claim 15, Siddiqi discloses:

The applicant claims "A control program embodied on a non-transitory memory that, when executed causes a device to perform operations" (Column 10, Lines 53-58 of Siddiqi, wherein Siddiqi discloses that a software implementation of the techniques of the invention is stored in a general-purpose programmable machine).

The applicant claims "comprising: storing a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4,

& Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "receiving packet transfer information from an access point; extracting an address of a transfer destination and estimating that a terminal corresponding to an address registered in a managed terminal list exists as a subordinate of the access point retaining said packet transfer information wherein said address coincides with said extracted address" (Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a



response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point, extracting an address of a transfer destination corresponding to said detected port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point, extracting an address of a transfer destination corresponding to said detected port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by

providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Regarding claim 16, Siddiqi discloses:

The applicant claims "A control program embodied on a non-transitory memory that, when executed causes a device to perform operations" (Column 10, Lines 53-58 of Siddiqi, wherein Siddiqi discloses that a software implementation of the techniques of the invention is stored in a general-purpose programmable machine).

The applicant claims "comprising: storing a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4, & Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "receiving packet transfer information from an access point; and extracting an address of a transfer destination and investigating an operation situation of a terminal corresponding to an address registered in a managed list having said extracted address to determine that said terminal having said extracted address has a connection with the access point retaining said received packet transfer information in a case where said terminal having said address is in operation, wherein said address coincides with said extracted address" (Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses

synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point; extracting an address of a transfer destination corresponding to said detected port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point;

extracting an address of a transfer destination corresponding to said detected port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Regarding claim 17, Siddiqi in view of Fukutomi discloses "The computer program product according to claim 16." The apparatus/system claims disclosed above performs the functionalities that correspond to the computer program product claim, therefore the examiner rejects claim 17 with the same arguments provided above (see claim 3).

Regarding claim 18, Siddiqi in view of Fukutomi discloses "The computer program product according to claim 16." The apparatus/system claims disclosed above performs the functionalities that correspond to the computer program product claim, therefore the examiner rejects claim 18 with the same arguments provided above (see claim 4).

Regarding claim 19, Siddiqi in view of Fukutomi discloses "The computer program product according to claim 16." The apparatus/system claims disclosed above performs the functionalities that correspond to the computer program product claim, therefore the examiner rejects claim 19 with the same arguments provided above (see claim 5).

Regarding claim 21, Siddiqi discloses:

The applicant claims "A monitor method of a wireless network for managing a terminal" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25 & Column 7, Lines 6-21 & Lines 55-61 & Column 8, Lines 24-33 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses an authoritative access point AAP (monitor apparatus connected to the access point) maintaining a subnet mapping table storing a plurality of entries each storing managed AP (managed terminal) information and synchronizing the subnet mapping table (packet transfer information) in the network by sending the subnet mapping table to all the APs and other AAPs and continues to disclose an example wherein a second authoritative access point AAP sending AP information such as a subnet mapping table to a first AAP and wherein the first AAP attempts to add entries from the received subnet mapping table to its own

subnet mapping table by first comparing and determining if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table of the first AAP and then determining whether the AP IP address ("wireless interface transfer destination" of managed terminal) is stored in its subnet mapping table and then confirming that the entry is still active and reachable by sending an ALIVE packet to the AP IP address identified and if the AP is active, it sends an ALIVE ACK packet back to the AAP which includes its current subnet address and IP address and the AAP will then use this latest information and enter it into its existing subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) has a correspondence between itself and a managed AP (managed terminal) when determining to add the managed AP by sending an ALIVE packet to determine if the managed AP is reachable or not).

The applicant claims "comprising: storing a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4, & Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "receiving packet transfer information from an access point; extracting an address of a transfer destination and estimating that a terminal corresponding to an address registered in said managed terminal list, said address coinciding with said extracted address, having said extracted address exists as a subordinate of the access point retaining said received packet transfer information"

(Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP (second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point; extracting an address of a transfer destination corresponding to said detected port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point; extracting an address of a transfer destination corresponding to said detected port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Regarding claim 22, Siddiqi discloses:

The applicant claims "A monitor method of a wireless network for managing a terminal" (Fig. 6 & Column 4, Lines 65 – Column 5, Lines 1-6 & Column 6, Lines 20-25



& Column 7, Lines 6-21 & Lines 55-61 & & Column 8, Lines 24-33 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses an authoritative access point AAP (monitor apparatus connected to the access point) maintaining a subnet mapping table storing a plurality of entries each storing managed AP (managed terminal) information and synchronizing the subnet mapping table (packet transfer information) in the network by sending the subnet mapping table to all the APs and other AAPs and continues to disclose an example wherein a second authoritative access point AAP sending AP information such as a subnet mapping table to a first AAP and wherein the first AAP attempts to add entries from the received subnet mapping table to its own subnet mapping table by first comparing and determining if there are additional items in the received subnet mapping table that are not in the stored subnet mapping table of the first AAP and then determining whether the AP IP address ("wireless interface transfer destination" of managed terminal) is stored in its subnet mapping table and then confirming that the entry is still active and reachable by sending an ALIVE packet to the AP IP address identified and if the AP is active, it sends an ALIVE ACK packet back to the AAP which includes its current subnet address and IP address and the AAP will then use this latest information and enter it into its existing subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) has a correspondence between itself and a managed AP (managed terminal) when determining to add the managed AP by sending an ALIVE packet to determine if the managed AP is reachable or not).

The applicant claims "comprising: storing a managed terminal list having addresses of terminals registered, said terminals being targets of management" (Fig. 4, & Column 8, Lines 24-33 of Siddiqi, wherein Siddiqi discloses the AAP maintaining a subnet mapping table storing a plurality of entries each storing AP information such as home agent IP address and subnet mask).

The applicant claims "receiving packet transfer information from an access point; extracting an address of a transfer destination and investigating an operation situation of a terminal corresponding to an address registered in said managed list, said list addresses coinciding with said extracted address, having said extracted address to determine if said terminal having said extracted address has a connection with the access point retaining said received packet transfer information in a case where said terminal having said address is in operation" (Column 7, Lines 6-21 & Lines 40-61 & Column 9, Lines 15-24 & Lines 37-59 of Siddiqi, wherein Siddiqi discloses synchronizing all the subnet mapping table within the network by sending the subnet mapping table to all the APs (managed terminals) and AAPs (monitor apparatus connected to the access point) and wherein upon receiving the subnet mapping table from a second AAP, the AAP checks and determines the entries in its local table with the updated entries received from the other AAP and adding or removing an entry upon the AAP determining if the AP entry is its subordinate by sending an ALIVE packet and waiting for a response ALIVE ACK before adding the entry within its own subnet mapping table, therefore the AAP (monitor apparatus connected to the access point) receives the subnet mapping table (packet transfer information) from a second AAP

(second monitor apparatus connected to a second access point) and extracts the address of the AP (managed terminal) that it needs to add to its local mapping table in order for the AAP to determine if the AP is its subordinate as the received mapping table indicates by sending an ALIVE packet to the address of the AP and waiting for a response ALIVE ACK from the AP before adding the entry and if no ALIVE ACK is received, the AP is therefore not a subordinate of the AAP and no entry is added).

Siddiqi fails to explicitly recite "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point; extracting an address of a transfer destination corresponding to said detect port."

In a related field of endeavor, Fukutomi discloses:

The applicant claims "detecting a port bound to a wireless interface from said packet transfer information, said wireless interface being the port of the access point; extracting an address of a transfer destination corresponding to said detect port" (Figs. 1-4 & Paragraph [0032]-[0034] of Fukutomi, wherein Fukutomi discloses the mapping table storing information such as IP addresses, destination address and the output ports for VLAN receiver, therefore each mapping table stores information necessary to forward, send and receive packets and information such as the destination address and its corresponding output ports and wireless interface used such as a VLAN receiver).

Ports and interfaces used to send information wirelessly or interfaces used to send information via wireline means are widely used in systems that sends and receives information. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Siddiqi to incorporate the teachings of Fukutomi of having a

mapping table containing information such as the destination address and the corresponding port of the wireless interface for the purpose of improving the system by providing a more complete and in depth information on how to route the packets by identifying what port to use and what interface to use which are commonly used methodologies and would have been obvious for the system of Siddiqi to have in order to ensure the packets are routed to the APs and other AAPs.

Regarding claim 23, Siddiqi in view of Fukutomi discloses "The monitor method of a wireless network according to claim 22." The examiner rejects claim 23 with the same arguments provided above (see claim 3).

Regarding claim 24, Siddiqi in view of Fukutomi discloses "The monitor method of a wireless network according to claim 22." The examiner rejects claim 24 with the same arguments provided above (see claim 4).

Regarding claim 25, Siddiqi in view of Fukutomi discloses "The monitor method of a wireless network according to claim 22." The examiner rejects claim 25 with the same arguments provided above (see claim 5).

9. Claims 6, 12, 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siddiqi et al. (US Patent 7362742 herein after referenced as Siddiqi) in view of Fukutomi (US Patent Publication 2003/0012202 herein after referenced as Fukutomi) and further in view of Kime et al. (US Patent Publication 2005/0060576 herein after referenced as Kime).

Regarding claim 6, Siddiqi in view of Fukutomi discloses:

The applicant claims "The monitor apparatus of a wireless network according to claim 2, characterized in, in a case where the address of the identical terminal has been described in said packet transfer information retained by plural access points" (Column 10, Lines 35-40 & Column 8, Lines 48-50 of Siddiqi, wherein Siddiqi discloses the synchronization operation performed by the AAPs is done so that every AP in the entire network will have the same copy of the table and wherein Siddiqi discloses the AP being initially configured with one or more AAP).

The applicant claims "including: a means for, from said terminal, acquiring identification information of the wireless network to which said terminal belongs" (Column 7, Lines 48-52 & Lines 63-37 of Siddiqi, wherein the AP sends AP information to the AAP when it first powers up and then the AAP sends the AP information associated with other active APs from the subnet mapping table to the newly active AP).

The applicant claims "and a means for determining that said terminal has a connection with its access point" (Column 9, Lines 53-55 of Siddiqi, wherein Siddiqi discloses the AAP sending an ALIVE packet to determine if the AP is active).

Siddiqi fails to explicitly recite "a means for comparing identification information of said plural access points with the identification information acquired from said terminal."

In a related field of endeavor, Kime discloses:

The applicant claims "a means for comparing identification information with the identification information acquired from said terminal" (Fig. 3 & Paragraph [0028] wherein Kime discloses comparing the client information such as IP or MAC addresses

with information previously stored of authorized clients to determine if an unauthorized client is accessing network resources).

Therefore it would have been obvious for one of ordinary skill in the art to modify the invention of Siddiqi in view of Fukutomi to incorporate an authentication process as taught by Kime, the reason for the combination being to increase security and to determine and prevent fraudulent and unauthorized access points from accessing the network (Paragraph [0029] of Kime).

Regarding claim 12, Siddiqi in view of Fukutomi discloses "The monitor system of a wireless network according to claim 8." The examiner rejects claim 12 with the same arguments provided above (see claim 6).

Regarding claim 20, Siddiqi in view of Fukutomi discloses "The computer program product according to claim 16." The examiner rejects claim 20 with the same arguments provided above (see claim 6).

Regarding claim 26, Siddiqi in view of Fukutomi discloses "The monitor method of a wireless network according to claim 22." The examiner rejects claim 26 with the same arguments provided above (see claim 6).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Mapa whose telephone number is (571)270-5540. The examiner can normally be reached on MONDAY TO THURSDAY 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on (571)272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Mapa/  
Examiner, Art Unit 2617

/Erika A. Gary/  
Primary Examiner, Art Unit 2617